



# ASSOCIATED

## MODEL 6080A 1-36 CELL SERIES CHARGER OPERATOR'S MANUAL

Be sure to read and understand these instructions before using this unit. Save these instructions. This manual contains important safety, operating and maintenance instructions.

### INTRODUCTION

The Model 6080 is a battery charger designed to charge batteries in series. It will charge 1 to 36 battery cells (2 to 106 volts) at a charge rate not to exceed 6 amps.

It will charge "standard lead-acid," "recombination" and "maintenance-free" batteries. The charger has 64 charge rates to allow the user to adjust the output too exactly the charge rate desired.

### **IMPORTANT SAFETY INSTRUCTIONS**

**SAVE THESE INSTRUCTIONS** - This manual contains important safety and operating instructions for battery charger Model 6080.

#### 1. DANGER - RISK OF EXPLOSIVE GASES

- a. Working in vicinity of a lead acid battery is dangerous. Batteries generate explosive gases during normal battery operation. These gases may be ignited by a spark or flame and burn back through the vent hole and explode inside the battery cell. Such an explosion is dangerous because pieces of the battery and battery acid may cause great harm to anyone in the immediate area. Battery acid will cause burns to the skin and eyes if not immediately washed off with fresh water. For this reason it is of utmost importance that each time before using your charger you read this manual and follow instructions exactly.
- b. To reduce risk of battery explosion, follow these instructions and those published by the battery manufacturer and manufacturer of any equipment you intend to use in the vicinity of battery. Review cautionary markings on these products and on the engine.

#### 2. PERSONAL PRECAUTIONS

- a. Always wear a face shield when working around lead-acid batteries. Avoid rubbing or touching eyes while working near batteries.
- b. Never smoke or allow a spark or flame in the vicinity of a battery or engine.
- c. Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes. IF ACID ENTERS EYE, immediately flood eyes with running cold water for at least 10 minutes and get medical attention immediately. Never use eyedrops or other medication unless ordered to by a doctor.
- d. Never charge a frozen battery.
- e. Someone should be within range of your voice or close enough to come to your aid when you work near a lead-acid battery.
- f. Be extra cautious to reduce risk of dropping a metal tool onto the battery. It might spark or short circuit battery or other electrical part that may cause an explosion.
- g. Remove personal metal items such as rings, bracelets, necklaces, and watches when working with a lead-acid battery. A lead-acid battery can produce a short circuit current high enough to weld a ring or the like to metal, causing a severe burn.
- h. Use this charger for charging a LEAD-ACID battery only. It is not intended to supply power to a low-voltage electrical system other than in an automotive application. Do not use this battery charger for charging dry-cell batteries that are commonly used with home appliances. These batteries may burst and cause injury to persons and damage to property.

#### 3. CAUTION - To reduce the risk of injury, charge only wet cell, lead-acid, automotive type rechargeable batteries. Other types of batteries may burst causing personal injury and damage.

Do not expose the charger to rain or snow if specifically warned on the unit not to do so.

Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons.

To reduce risk of damage to electric plug and cord, pull by plug rather than cord when disconnecting charger.

Make sure cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.

An extension cord should not be used unless absolutely necessary. Use of improper extension cord could result in a risk of fire and electric shock.

If extension cord must be used make sure:

- a. That pins on the plug of extension cord are the same number, size and shape as those of the plug on the charger.
  - b. That extension cord is properly wired and in condition, and
  - c. If the length of the extension cord is less than 25 feet, use a 14- AWG cord. If 50 feet 12-AWG. 100 feet 10-AWG. 150 feet 8-AWG.
- Do not operate the charger with a damaged cord or plug, replace them immediately.

Do not operate the charger if it has received a sharp blow, been dropped, or otherwise damaged in any way, take it to a qualified serviceman.

Do not disassemble the charger unless you are qualified to work on electrical products. If not, take it to a qualified serviceman when service or repair is required. Incorrect reassembly may result in risk of electric shock or fire.

To reduce risk of electric shock, unplug charger from the outlet before attempting any maintenance or cleaning. Turning off controls will not reduce this risk.

#### 4. PREPARING TO CHARGE

- a. When removing battery from vehicle to charge, always remove grounded terminal from battery first. Make sure all accessories in the vehicle are off, so as not to cause an arc.
- b. Be sure area around battery is well-ventilated while battery is being charged. Gas can be forcefully blown away by using a piece of cardboard or other non-metallic material as a fan.
- c. Clean battery terminals. Be careful to keep corrosion from coming contact with eyes.
- d. Add distilled water in each cell until battery acid reaches level specified by battery manufacture. This helps purge excessive gas from cells. Do not overfill. For a battery without cell caps, carefully follow the manufacturer's recharging instructions.
- e. Study all battery manufacturer's specific precautions such as removing or not removing cell caps while charging and the recommended rate of charge.

#### 5. CHARGER LOCATION

- a. Locate the charger as far away from the battery as the DC cables permit.
- b. Never place the charger directly above a battery being charged; gases from battery will corrode and damage the charger.
- c. Never allow battery acid to drip on the charger when reading specific gravity or filling battery.
- d. Do not operate the charger in a closed-in area or restrict ventilation in any way.
- e. Do not set a battery on top of the charger.

#### 6. DC CONNECTION PRECAUTIONS

- a. Connect and disconnect DC output clamps only after setting charger switches on OFF position and removing AC cord from electric outlet. Never allow clamps to touch each other.
- b. Attach clamps to battery post and twist or rock back and forth several times to make a good connection. This tends to keep clamps from slipping off terminals and helps to reduce risk of sparking.

#### 7. FOLLOW THESE STEPS WHEN BATTERY IS INSTALLED IN VEHICLE. A SPARK NEAR THE BATTERY MAY CAUSE BATTERY EXPLOSION. TO REDUCE RISK OF A SPARK NEAR BATTERY:

- a. Position AC and DC cords to reduce risk or damage by hood, door, or moving engine parts.
- b. Stay clear of fan blades, belts, pullets, and other parts that can cause injury to persons.
- c. Check polarity of battery post. POSITIVE (POS, P, +) battery post usually has a larger diameter than NEGATIVE (NEG, N, -) post.
- d. Determine which post of battery is grounded (connected) to the chassis. If negative post is grounded to the chassis (as in most vehicles), see item "e." If positive post is grounded to the chassis, see item f.
- e. For negative-grounded vehicle, connect POSITIVE (RED) clamp from the battery charger to POSITIVE (POS, P, +) ungrounded post of battery. Connect NEGATIVE (BLACK) clamp to vehicle chassis, heavy gauge metal part of frame, or engine block away from battery. Do not connect the clamp to carburetor, fuel lines, or sheet metal part of the frame.
- f. For positive-grounded vehicle, connect NEGATIVE (BLACK) clamp from battery charger to NEGATIVE (NEG, N, -) ungrounded post of battery. Connect POSITIVE (RED) clamp to vehicle chassis or engine block away from battery. Do not connect clamp to carburetor, fuel lines, or sheet metal body parts. Connect to a heavy gauge metal part of the frame or engine block.
- g. When disconnecting the charger, turn switches to off, disconnect AC cord, remove clamp from vehicle chassis, and then remove clamp from battery terminal.
- h. See operating instructions for length of charge information.

#### 8. FOLLOW THESE STEPS WHEN BATTERY IS OUTSIDE VEHICLE. A SPARK NEAR THE BATTERY MAY CAUSE BATTERY EXPLOSION. TO REDUCE RISK OF A SPARK NEAR BATTERY:

- a. Check polarity of battery post. POSITIVE (POS, P, +) battery post usually has a larger diameter than the NEGATIVE (NEG, N, -) post.
- b. Attach at least a 24 inch long 6-gauge (AWG) insulated battery cable to the NEGATIVE (NEG, N, -) battery post.
- c. Connect POSITIVE (RED) charger clamp to POSITIVE (POS, P, +) post of the battery.
- d. Position yourself and free end of the cables as far away from the battery as possible, then connect the NEGATIVE (BLACK) charger clamp to free end of cable.
- e. Do not face battery when making final connection.
- f. When disconnecting the charger, always do so in reverse sequence of connecting procedure and break first connection while standing as far away from battery as practical.
- g. A marine (boat) battery must be removed and charged on shore. To charge it on board requires equipment specially designed for marine use.

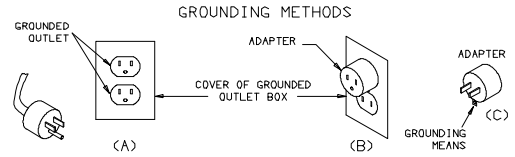
#### 9. GROUNDING AND AC POWER CORD CONNECTION INSTRUCTIONS

This charger should be grounded to reduce risk of electric shock. This charger is equipped with an electric cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

**DANGER.** Never alter AC cord or plug provided if it will not fit the outlet, have a proper outlet installed by a qualified electrician. Improper connection can result in a risk of electric shock. This battery charger is for use on a nominal 120 volt circuit. It has a grounding plug that looks like the plug illustrated in sketch (A). A temporary adapter, which looks like the adapter illustrated in sketch C, may be used to connect this plug

to a two-pole receptacle, as shown in sketch B, until a properly grounded outlet can be installed by a qualified electrician.

**DANGER.** Before using adapter as illustrated, be certain that center screw of outlet plate is grounded. The green-colored rigid ear of lug extending from adapter must be connected to a properly grounded outlet, make certain it is grounded. If necessary, replace original outlet cover plate screw with a longer screw that will secure adapter ear lug to outlet cover plate and make ground connection to grounded outlet.



**MOUNTING:**

The Battery Charger may be set on a table or a shelf. Do not set charger on floor. It should be mounted such that the air intake louvers are at least 18 inches from the floor. Regardless of how it is placed, the top and side louvers of the unit must not be blocked. This is a convection cooled charger and blocking the louvers will damage the unit. When locating the unit, take into account the number of batteries to be recharged and location of the recharging racks. Never place the charger such that battery acid or water may be spilled in the top of the unit. Never place the unit directly over the batteries to be charged. Fumes caused by gassing batteries will be drawn through the charger by convection and cause damage to the unit.

**CONTROLS:**

**AMMETER:** Indicates the amount of current that the batteries are receiving. The larger the amount of current, the faster the batteries will charge. All batteries in a series group will receive the same amount of current. Do not exceed 6 amps charge rate.

**MAIN POWER SWITCH:** This switch turns the power off to the entire charging unit. Any time the charger is not being used, this switch should be turned off to conserve energy.

**CHARGE RATE SWITCH:** These switches may be used to adjust the charging current the batteries will receive. An off position on these switches will disconnect power from the clamps. One of these switches or the main power switch should be off whenever handling the output clamps.

If the charger is not going to be used for a period of time, turn the main power switch off to conserve energy. Turning off only a charge rate switch will not have the same effect.

**CAUTION !!!**

When a number of batteries are connected in series, a high DC voltage exists at the terminals of the end batteries. When not connected, the charger DC leads will have no output voltage but the battery terminal may still present a shock hazard.

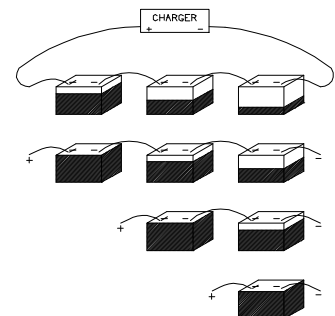
**SERIES CHARGING:**

Connecting batteries in series (see illustration) allows a person to charge a number of batteries at one time using only one low current, high voltage charger. The amount of charge that each battery receives is indicated by the ammeter. Thus, each battery will arrive in a fully charged condition at a different time. Conditions that affect charging time are battery temperature, size, state of charge, type of battery, and other factors.

Six and twelve volt batteries may be intermixed when series charging. The total voltage of the batteries should not exceed the rated voltage of the charger.

Example: A Charger is rated a nominal 36 cells. Six 12 volt batteries in series or twelve 6 volt batteries in series can be charged or any combination of six and twelve volt batteries that total 36 cells.

To charge batteries in series, connect the charger's positive lead to the positive post of the first battery. Connect a jumper from the negative post of the first battery to the positive post of the next battery. Continue until all batteries are connected. Attach negative lead of charger to remaining battery post.



Dark area represents state of charge of battery.

At start of charge

Remove battery when it becomes fully charged

Charger output voltage must be turned down after battery is removed

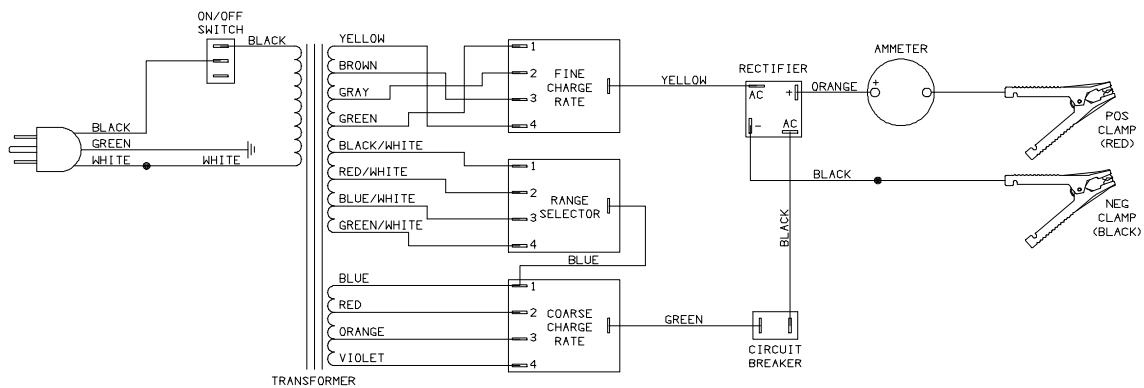
At finish of charge, turn main power switch "Off" to conserve energy

When a battery is fully charged, it must be removed from the charging circuit. If it is not, it may be damaged by over charging.

### END OF CHARGE:

Discontinue charge when three successive hydrometer readings taken at half hour intervals fail to show an increase in specific gravity, or when battery begins to gas excessively or when temperature of electrolyte reaches approximately 120EF. If a battery is sealed and these determinations cannot be made, see manufacturer's instructions for charging.

## WIRING DIAGRAM



## MODEL 6080A PARTS LIST

- 605675 - Switch w/knob (1)
- 610172 - Switch - Rocker
- 605616 - Ammeter
- 605206 - AC Cord
- 610098 - DC Cable set
- 610117 - Circuit Breaker
- 610090 - Rectifier
- 610088 - Transformer

- 610057 - Handle (optional accessory)
- 610072 - Side panels (1 pair)
- 610075 - Top panel
- 610076 - Base
- 610082 - Back panel
- 610083 - Front panel
- 6074 - Jumper leads (set of 5)

Parts may be purchased from your local authorized service depot listed in the Service Procedure Manual supplied with your product.

If you elect to order parts from the factory you may do so by mail or phone. Minimum order from the factory is \$25.00. Orders received that are under the minimum will not be processed. Taxes and freight are extra and are not considered to be part of the dollar value of the order. We Do Not have a C.O.D. policy. Cashiers check, money order, Master Card or Visa Card are acceptable. If you use a Master Card or Visa Card, send only the number and expiration date. DO NOT SEND CARD.

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#### ILLUSTRATION LISTING

	FILENAME	DESCRIPTION
FIG. 1	LOGO.EPS	ASSOCIATED LOGO
FIG. 2	PLUG.PLT	GROUNDING ADAPTER
FIG. 3	SERS_BAT.PLT	SERIES BATTERY HOOKUP
FIG. 4	6080awir.PLT	WIRING DIAGRAM 6080a